

TENNESSEE LANDOWNER INCENTIVE PROGRAM

PROTECTING AND RESTORING RARE SPECIES HABITAT

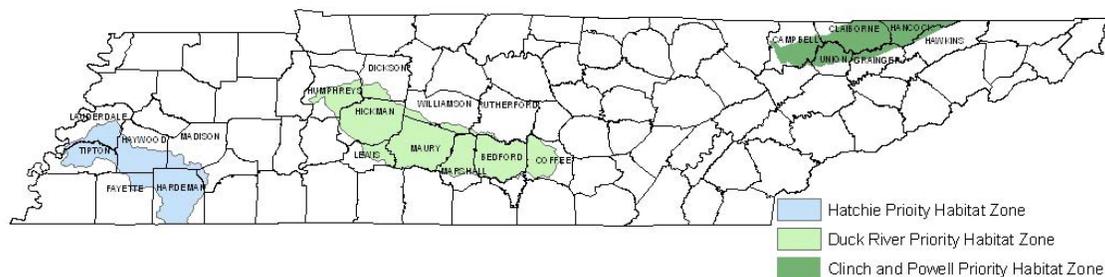
This program is designed to protect and restore rare species habitats on Tennessee's private lands. TNLIP provides 75% cost-share assistance and cash incentives for qualifying practices to landowners for implementation of **Best Management Practices (BMPs)** on their property that benefit rare and declining species. The remaining 25% of the project can be direct payment by the landowner, in-kind support such as equipment, labor, or from other nonfederal sources. Although the primary focus of TNLIP is on rare species the **BMPs** will benefit landowners by reducing soil erosion and improving water quality. Many of the **BMPs** done for rare and declining species will also benefit game species such as deer, turkey, and quail along with variety of other species. Improvements in water quality will also benefit trout, bass and other game fish as well as human uses such as drinking water and recreation.

The majority of Tennessee's rare species occur in streams and rivers on or near many properties without ever being noticed. TNLIP will help these species by improving water quality through property improvements adjacent to the streams, rivers, and sinkholes. In many of the LIP projects that will be implemented, landowners will never see the species they are helping. In all cases, cooperating landowners should not worry about liabilities or loss of property rights with rare species on their land because TWRA will provide safeguards to ensure no change in land use rights or practices will result if endangered or threatened species are located on or near your property.

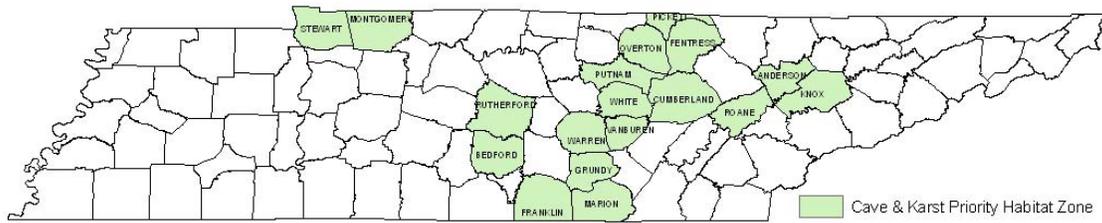
WHO CAN APPLY?

TNLIP is a statewide program and can provide technical and financial assistance to landowners in all of Tennessee's counties. There are currently four major Priority Watersheds where restoration is given high priority. They include the **Duck River, Hatchie River, Clinch, and Powell** watersheds. Another area that is often not seen is the **Cave and Karst** areas of Tennessee. The **Cave Priority Habitat Zone** includes the counties of **Anderson, Bedford, Cumberland, Fentress, Franklin, Grundy, Knox, Marion, Montgomery, Overton, Pickett, Putnam, Roane, Rutherford, Steward, Van Buren, Warren** and **White**. Landowners **Statewide** are also encouraged to apply because in 2008 a specific grant makes more funds available for these projects. The only requirements for an area to be eligible for TNLIP are: 1) the property is privately owned and 2) the project will benefit rare species habitat.

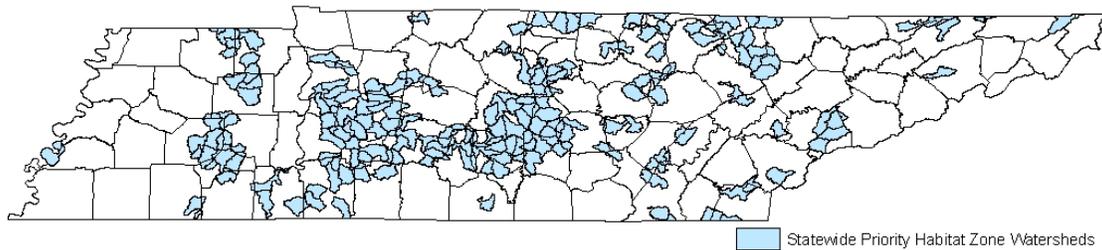
TNLIP Priority Areas



(Click map for larger image)



(Click map for larger image)



(Click map for larger image)

Cave and Karst LIP

In 2007 TNLIP began providing funding to landowners in cost-share to protect, enhance, and restore the often unseen and unique habitat for rare species found in and around caves and sinkholes. The Cave and Karst program has \$203,500 for landowner cost-share available over the next 2 years. The Cave and Karst TNLIP is a partnership with the [Tennessee Chapter of The Nature Conservancy](#). TWRA is using the already vast cave knowledge and experience of The Nature Conservancy to assist in implementing the program. Currently there are 8,500 known caves in Tennessee. These unique ecosystems are often sensitive to pollutants carried in with groundwater and dumped into caves and sinkholes. These areas provide habitats for a number of rare species, some of these animals may only be associated with one or two caves making them very rare. In many areas groundwater from caves works its way into streams and rivers miles away. By reducing the flow of pollutants into caves and sinkholes water quality for humans and a variety of other wildlife species will benefit. For more information on caves and sinkholes and how and why they should be protected visit the Cave Conservancy of Virginia's [Living on Karst](#). Many of habitat protection practices recommended by the Cave Conservancy of Virginia maybe fundable under the new TNLIP Cave/Karst program if they will benefit rare cave species. For additional information on the Cave/Karst program or to get assistance with applying for the program contact Cory Holliday 615-383-9909 or email: cholliday@tnc.org or a TWRA [Private Lands Biologist](#).

Streambank Stabilization

Exclusion Fence to Protect a Stream



Photos courtesy of the USDA NRCS

Clinch and Powell Rivers LIP

In 2007 money was made available to work with landowner in the Clinch and Powell Watersheds to protect imperiled species. TWRA teamed up with the [Virginia Chapter of The Nature Conservancy](#) who was already working hard in these watersheds in Tennessee. The grant for the Clinch-Powell LIP provides \$203,500 over the next 2 years to provide cost-share to landowners for improving and protecting rare species habitat. So far in the Clinch and Powell Watersheds under this grant have installed 23,718 ft of stream bank fencing, 20 alternate watering sources and 5 Heavy Use Areas, and protected 5 acres of critical area. These projects have protected on average 14 imperiled species and on average 9.5 of those have been Federally Listed species.

Duck and Hatchie River LIP

The initial grant for the Duck River and Hatchie River watersheds will be wrapping up in late 2008. In the Duck and Hatchie watershed TWRA teamed up with the Tennessee Chapter of The Nature Conservancy to help implement the program. In the Duck River Watershed this resulted in 99,493 ft of exclusion fence, 55 alternative watering sources, 22 hardened stream crossings, 790ft of stream bank stabilization, 42.8 acres of trees planted, 24.2 acres of critical area protection, 755 ft of hardened animal trails, 16 heavy use area, and 31.5 acres of grass buffers. These project protected on average 6.9 imperiled species of those an average of 3 federally listed species were protected. In the Hatchie River 5,260ft of exclusion fence, 3 stream crossing, 3.4 acres of trees, 1.5 acres grass buffer, and 20 erosion control structures were created. These projects on average helped 7.8 imperiled species of those an average of 2.5 federally listed species were protected. Landowners in these areas can still apply for cost-share assistance through the new Statewide grant system.

Statewide LIP

Since 2005 TWRA has been using a portion of the TIER 1 funds that they were awarded to help imperiled species across the state. Projects have included 22,174ft of exclusion fence, 16 alternate watering sources, 12 stream crossings, 5 acres of trees, 3 acres native grass buffer, and 6.7 acres of critical area. Erosion control projects have included 450 ft of streambank stabilization, 700ft of hardened animal trails, 7 Heavy Use Areas, and two graded control structures. These projects have on average protected 5.6 imperiled species of those on average 4.5 Federally Listed species have been protected.

In December of 2007 a new LIP grant was made available to assist landowners in protecting imperiled species habitat. Over the next two years there will be \$710,274 in cost share and assistance to help landowners with practices needed to protect imperiled species across the State. The Statewide grant identified 27 priority species that were found in 179 small watersheds across the state. Management that benefits these 27 imperiled species will be given high priority for funding under this new grant. However projects across the state that can benefit other imperiled species could also be funded under the new Statewide Grant.

Species Rarity or In Need of Management Determination

In order to determine if a species was rare or in need of management each organism was given a global rank of G1 (critically imperiled) through G5 (demonstrably widespread abundant and secure) by **NATURESERVE**. Each state has also given species found within their borders ranks from S1 (critically imperiled) to S5 (demonstrably widespread, abundant and secure). The Tennessee's ranking process is identified in the **State Action Plan**. In order for a species to qualify for a TNLIP habitat cost-share the species that it will benefit either needs to have a Global Rank of G1, G2, or G3 or a State Rank of S1, S2, or S3.

Examples of Rare Species and Species of Concern in Tennessee

<u>Mussels</u>	<u>Crustaceans</u>	<u>Fish</u>	<u>Amphibians</u>
Elktoe Butterfly Alabama Spike Cumberlandian Combshell Snuffbox Tennessee Pigtoe	Hardin County Crayfish Nashville Crayfish Flintbriar Crayfish Nickajack Cave Isopod	Western Sanddarter Smoky Dace Blue Sucker Lake Sturgeon Spotfin Chub Coppercheek Darter	Hellbender Seepage Salamander TN Cave Salamander Berry Cave Salamander Green Salamander
<u>Birds</u>	<u>Mammals</u>	<u>Reptiles</u>	<u>Snails</u>
Bachman's Sparrow Henslow's Sparrow Piping Plover	Gray Bat Eastern Small-footed Bat Indiana Bat	Alligator Snapping Turtle Bog Turtle	Acute Elimia Spiny Riversnail Corpulent Hornsnail Cave Disk Snail

To find out rare species that may occur in your area go to Tennessee Department of Conservation's Website which maintains a database of rare species by **COUNTY** or **WATERSHED**.

If you feel that you may have rare species on your property or in streams that your property drains into and you would like to do more for wildlife in your area contact a TWRA **Private Lands Biologist** for your area.

WHAT TYPES OF PROJECTS ARE AVAILABLE?

TNLIP is a very flexible program designed to benefit all of Tennessee's rare species. As a result, almost any practice that will benefit a rare species could be considered under this program. A majority of the effort will be dedicated to improving aquatic habitats by reducing erosion and nutrient runoff on properties near streams, cave, and sinkholes. Some example projects would include:

- Streambank Stabilization
- Providing Alternative Water Sources for Livestock
- Protection of Riparian Buffers
- Creating Filter Strips
- In-Stream Habitat Improvement and Management

- Development of Grade Stabilization Structures for Erosion Control
- Creation of Heavy Use Areas for Feeding Livestock
- Creation of Stream Crossing
- Wetland Restoration
- Sinkhole Clean-up and Protection
- Construction of Cave Gates
- Barren Restoration



Photos courtesy of the USDA NRCS

HOW DO I APPLY?

1. Contact the [Private Lands Biologist](#) in your region or the TNLIP Coordinator Brian.Flock@state.tn.us.

It is highly recommended that landowners use the free technical service provided by TWRA Private Lands Biologist. Even if you do not have rare species on your property the TWRA biologist can aid you in determining what other funding maybe available to assist you in improving your property for wildlife.

2. TNLIP personnel will identify rare species in your area and schedule a site visit to your property.
3. TNLIP personnel will visit your property, assess habitats, and discuss potential management techniques.
4. A [Management Plan](#) will be completed and submitted to the TN LIP Coordinator.
5. The TNLIP review committee will rank projects based on [program criteria](#) and select the most conservation beneficial projects for funding.
6. Approved projects will have final management plans, budgets, and timelines determined for project implementation.

Streambank Before



Streambank After



Photos courtesy of Corey Giles, TNC Duck River Landowner Project Manager

HOW CAN I LEARN MORE?

By contacting the [Private Lands Biologist](#) for your area

or

Brian Flock, TNLIP Coordinator, at:
Tennessee Wildlife Resource Agency
Wildlife Division, TNLIP
P.O. Box 40747
Nashville, TN 37204
615-781-6597
615-781-6610 Wildlife Division
Brian.Flock@state.tn.us

NOTE: While State employees and/or their spouses can receive free technical assistance from TWRA through the Tennessee Landowner Incentives Program, Tennessee State Law prohibits them from receiving any direct or indirect payments. Money received through the TNLIP is considered taxable by the IRS. Consult a tax advisor regarding your tax situation.